

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~Device for injection and mixing of liquid droplets, comprising means for mixing a second drop with a first drop deposited on an electrically insulating layer of an analysis support, device wherein a viscous liquid in which the first and second drops are not miscible is deposited on the electrically insulating layer of the analysis support and the device comprises at least one injector designed to form, at an outlet orifice, the second drop above the first drop, the device comprising control means for controlling a voltage applied between a first electrode, arranged under the electrically insulating layer of the analysis support, underneath the first drop, and a second electrode arranged near to the outlet orifice of the injection.~~

A device for injection and mixing of droplets of respective first and second liquid reagents, comprising:

an analysis support including an electrically insulating layer;

a viscous liquid deposited on the electrically insulating layer, wherein said viscous liquid is immiscible with said reagent droplets within said viscous liquid;

a droplet of said first reagent deposited on said electrically insulating layer;

an injector including said second liquid reagent and an outlet orifice, said injector forming a droplet of said second liquid reagent above the said droplet of first reagent;

a first electrode arranged underneath said droplet of first reagent and said electrically insulating layer;

a second electrode arranged near to the outlet orifice of the injector; and

a controller for applying and controlling a voltage applied between said first and second electrodes, said voltage generating electrostatic forces which cause a deformation of said droplets of respective first and second reagents, before said droplets come into contact and mix.

2. (Original) Device according to claim 1, wherein the second electrode is a metal needle.

3. (Original) Device according to claim 1, wherein the second electrode surrounds a part of the walls of the injector.

4. (Original) Device according to claim 3, wherein the injector is sheathed by an electrically conducting material forming the second electrode.

5. (Currently Amended) Device according to claim 1, wherein the injector comprises ~~at its free end~~ a free end further including a capillary tube connected to a volumetric pump.

6. (Original) Device according to claim 5, wherein the capillary tube is a micro-tube made of fused silica, sheathed with polyimide.

7. (Original) Device according to claim 1, wherein the electrically insulating layer of the analysis support is arranged on an electrically insulating support provided with an electrically conducting zone forming the first electrode.

8. (Original) Device according to claim 7, wherein said zone is formed by at least one electrically conducting layer arranged between the insulating layer and the electrically insulating support.

9. (Original) Device according to claim 7, wherein said zone is formed by a continuous strip arranged under a row of first drops.

10. (Original) Device according to any claim 1, wherein the electrically insulating layer of the analysis support is mobile.

11. (Original) Device according to claim 1, comprising a plurality of injectors arranged so as to simultaneously form second drops above a row of first drops.

12. (Original) Device according to claim 1, comprising a plurality of injectors arranged so as to successively form second drops.

13. (Currently Amended) Device according to claim 1, wherein the ~~control means~~ comprise means for controller placing the first and second electrodes at the same potential during formation of the second drop by the injector, and ~~means for applying~~ applies, after formation of the second drop, a first voltage impulse between the first and second electrodes during a first time period of about a few milliseconds to one second.

14. (Currently Amended) Device according to claim 1, wherein the ~~control means~~ comprise means for applying controller applies a second voltage impulse between the first and second electrodes during a second time period of about a few milliseconds to a few seconds, after the first impulse.

15. (Original) Device according to claim 1, wherein the outlet orifice of the injector is arranged so that a distance between the first drop and the second drop is smaller than or equal to the mean diameter of the second drop.

16. (New) A process for mixing of droplets of respective first and second liquid reagents, comprising:

depositing a viscous liquid on an electrically insulating layer of an analysis support, wherein said viscous liquid is immiscible with said reagent droplets within said viscous liquid;

depositing a droplet of said first reagent on said electrically insulating layer;

forming a droplet of said second liquid reagent above the said droplet of first reagent, said droplet being formed via an outlet orifice of an injector;

arranging a first electrode underneath said droplet of first reagent and said electrically insulating layer;

arranging a second electrode near to said outlet orifice; and

applying and controlling a voltage between said first and second electrodes, said voltage generating electrostatic forces which cause a deformation of said droplets of respective first and second reagents before said droplets come into contact and mix.